

# Miramar Single Beam Freestanding Pergola with 5"x 5" Posts Installation Guide



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**weatherables**  
by USA Vinyl

# Before You Begin Installation

Consult your local authorities for any permits required to construct the pergola.

Check with local building code officials to review any required permits or building limitations.

Read instructions thoroughly prior to assembly.

If you have questions or concerns with this product please **DO NOT** return before consulting a product specialist. Please refer all questions and concerns to our product specialist at 1-888-743-3673.

Due to the size of the parts, at least two people are required to handle, fit and secure pergola components.

Read manual first as mounting hardware varies with each application. Do not anchor to paver bricks. Foundation must be a solid surface.

Do not stand, sit, store, or hang items on the pergola.

Repair or replace broken parts immediately. Call 1-888-743-3673 for replacement parts.

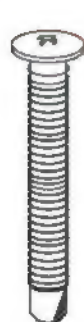
At regular intervals inspect your pergola to make sure that assembly integrity has been maintained.

The installation video can be found at:  
<http://www.usavinyl.com/vinyl-pergola-installation.html>

## **Tools Required for Inatallation:**

- |   |  |
|---|--|
| 1. Extension Cord   | 10. Deep Socket - 9/16"                                    |
| 2. Hammer Drill   | 11. Level  |
| 3. Reciprocating Saw<br>(optional only if you are cutting<br>down material) | 12. Tape measure ( min 25')                                |
| 4. Power Drill  | 13. 2 Ladders (for at least the height of<br>your pergola) |
| 5. 1" Drill Bit for metal   | 14. Rubber Mallet  |
| 6. Drill Bits - 5/16", 3/16"  | 15. Ratchet  |
| 7. Phillips Screwdriver Bit   | 16. Pencil   |
| 8. Masonry Bit - 3/8"   | 17. String Line  |
| 9. 10" Drill Bit Extension  | 18. Carpenter's Square                                     |
|   | 19. Safety Glasses   |

# Hardware



A

#10 x 2 1/2" Self  
Tapping Screw



B

.5" x 4.5"  
Wedge Anchor  
(with washer and nut)



C

#10 x 1" Self  
Tapping Screw



D

Glue



E

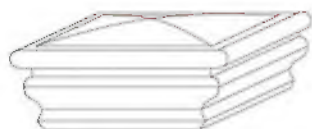
Hinged  
Screw Cap

\*Insert screw into cap  
before installing

## Hardware Quantities

Pergola Size	A	B	C	D	E					
12x12	88	8	44	1	128					
14x14	90	12	52	1	138					
16x16	119	12	60	1	175					

# Post Parts



F

5" Federation  
Post Cap



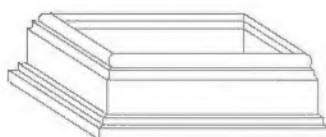
G

54" Concrete  
Post Mount



H

Vinyl Post  
5"x5"



I

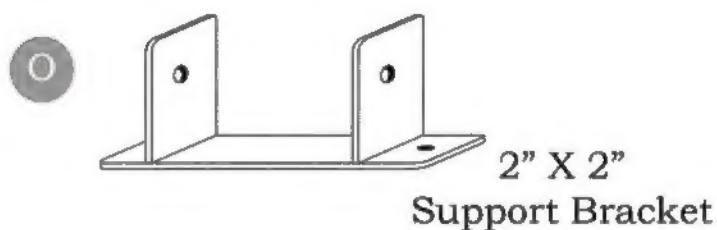
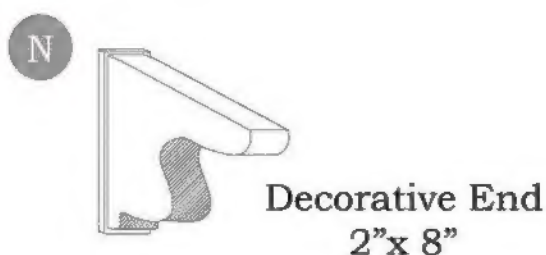
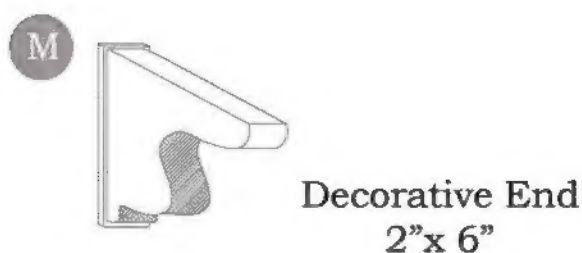
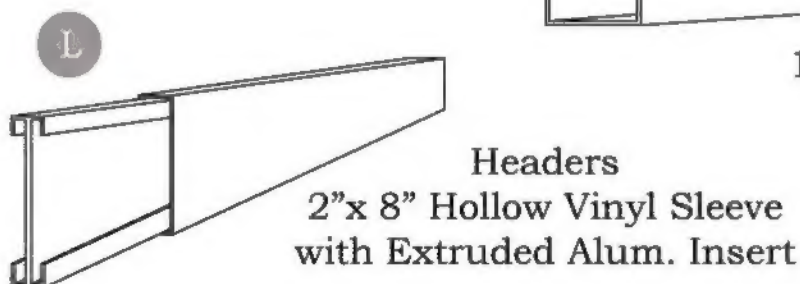
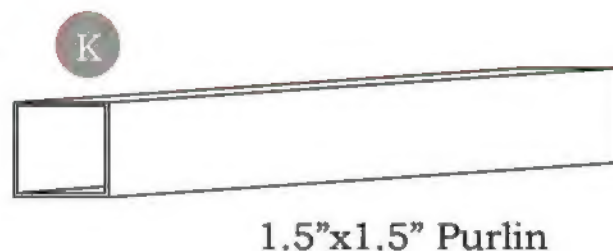
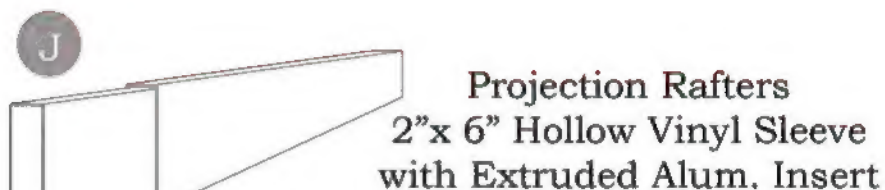
5" Post  
DressSkirt

## Post Parts Quantity

Pergola Size	F	G	H	I						
12x12	4	4	4	4						
14x14	6	6	6	6						
16x16	6	6	6	6						



# Canopy Parts



## Canopy Parts Quantity

Pergola Size	J	K	L	M	N	O	P		
12x12	7	12	2	14	4	10	24		
14x14	8	15	2	16	4	12	30		
16x16	9	17	2	18	4	14	34		

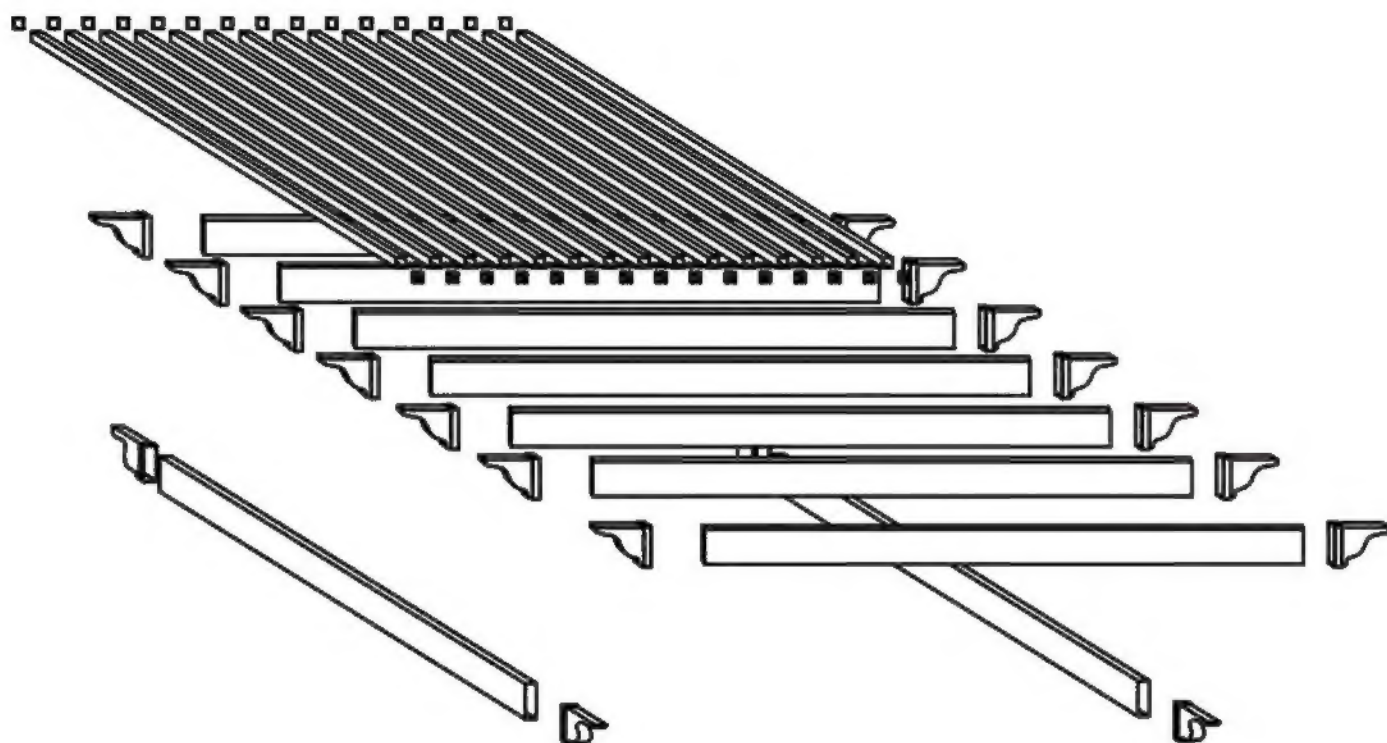
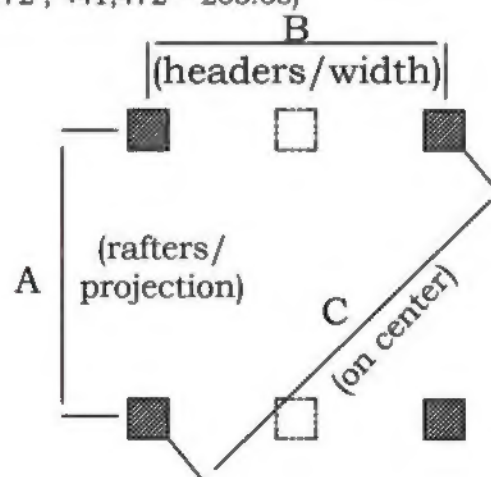
# Section 1: The Posts

## A. Preparation for Post Installation

The post layout below is a suggestion for squaring your posts: other methods can be used to get the same results. The formula for squaring post is  $A^2 + B^2 = C^2$

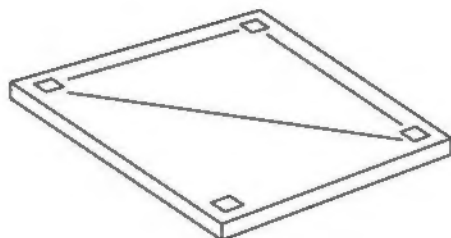
(Ex:  $144^2 + 144^2 = 20,736$  ,  $20,736 + 20,736 = 41,472$  ,  $\sqrt{41,472} = 203.65$ )

Pergola Size	(A) Rafter 2x6 (projection)	(B) Header 2x8 (width)	Number of posts	(C) Diagonal in inches (approx.)
12x12	144"	144"	4	203.65"
14x14	168"	168"	6	237.63"
16x16	192"	192"	6	271.53"



# Post Set Up

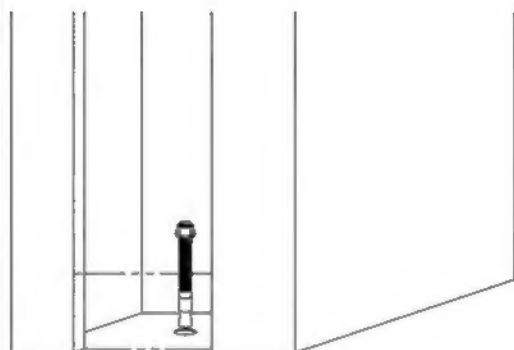
1



Lay out and mark the location of the posts according to the pergola size.

\*If you have a 14' or 16' pergola place the middle post directly in the center of the width side.

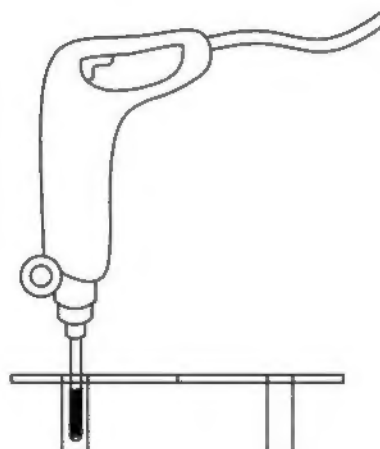
3



Place wedge anchors (B) into each hole and tap into concrete leaving 1" above the concrete. Place concrete post mount (G) over the installed anchors and install washer and nut to each anchor. Level and tighten with 9/16" socket.

**Do not over tighten.**

2



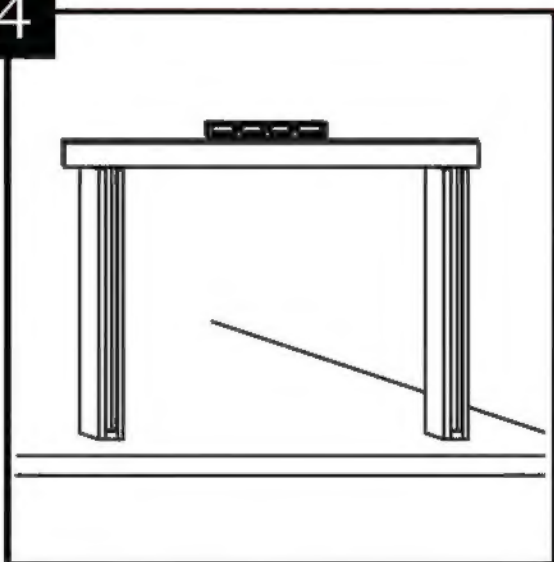
Place, square and trace each concrete post mount. (G) Pre-drill concrete mount holes with hammer drill at 4 1/2" depth with 3/8" masonry bit.

**Do not rush.**

**Note\*** If you have a 14' or 16' pergola you will have 2 extra posts to place in the middle. For the 14' pergolas the middle post will not be routed for the 2"x6" rail. The rafters will be evenly spaced on the header.

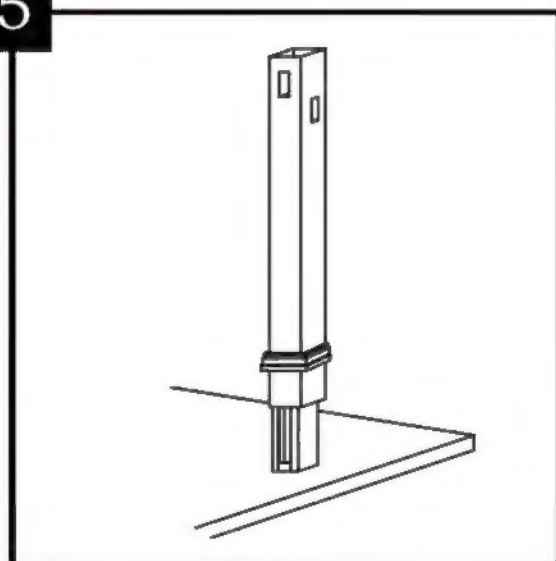
## Section 2: Vinyl Sleeve Installation

4



Check to see if your post are level and that your concrete mounts are matching in height by using one of your rafters. If posts heights are not the same, you will need to choose the lowest concrete mount to base the height of your posts. After leveling, cut your vinyl posts accordingly **from the bottom**.

5

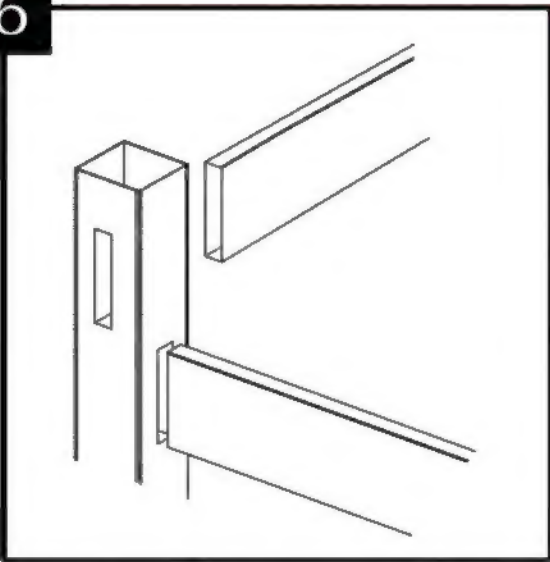


Place your post skirt (I) over your vinyl post (H). Place the post over the concrete mount.



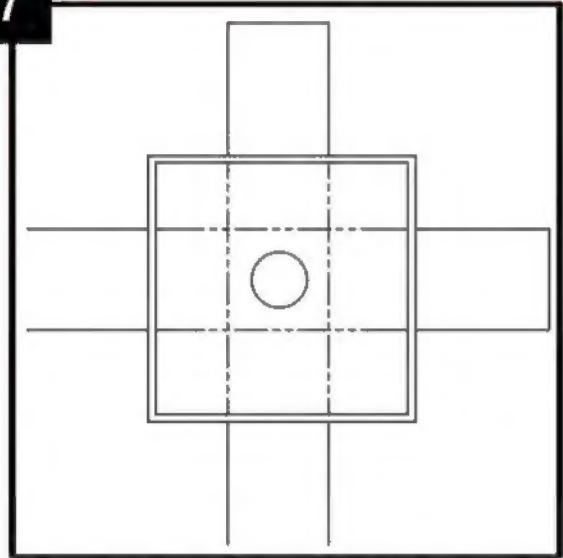
## Section 3: Header & Rafter - Prep & Installation

6



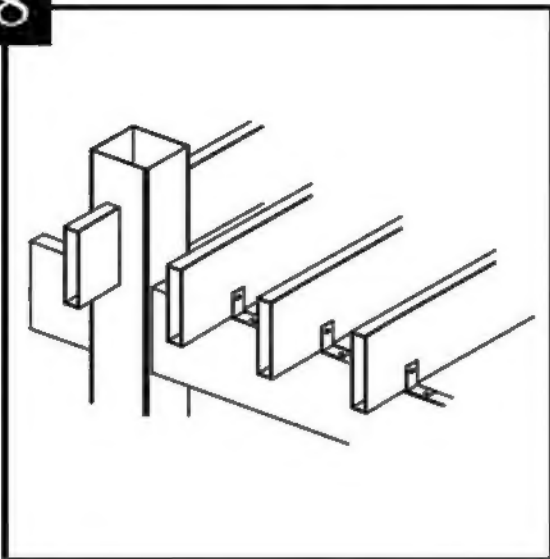
First position the headers (L) into the routed slots. Make sure there is at least a 5" overhang from the end of the header to the post on each side. Then position the rafters (J) into the slots, making sure there is at least a 3 1/2" overhang.

7



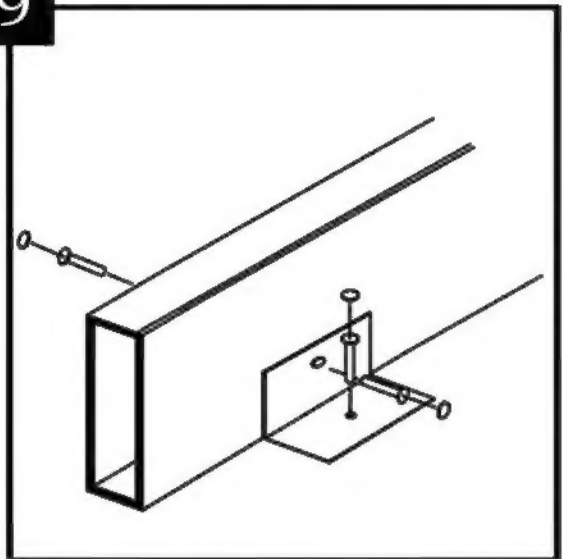
Looking down into your installed post at your rafter, drill a 1" hole using the 10" drill bit extension. Place a self-tapping screw into the hole to secure the rafter to your header. Repeat for each post.

8



Position the rafters approximately 22-24" on center. Do not attach until you have spaced the rafters first. If you modify the width these measurements will change. The rafters will extend at least 5" past the header on the outside.

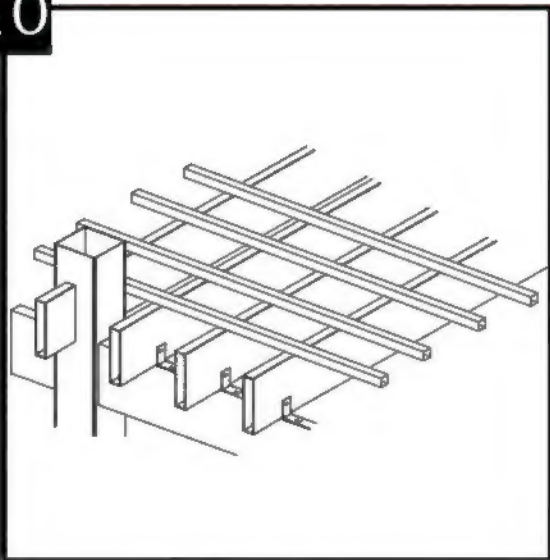
9



Use the #10 x 1" self-tapping screw (C) to secure the rafter.

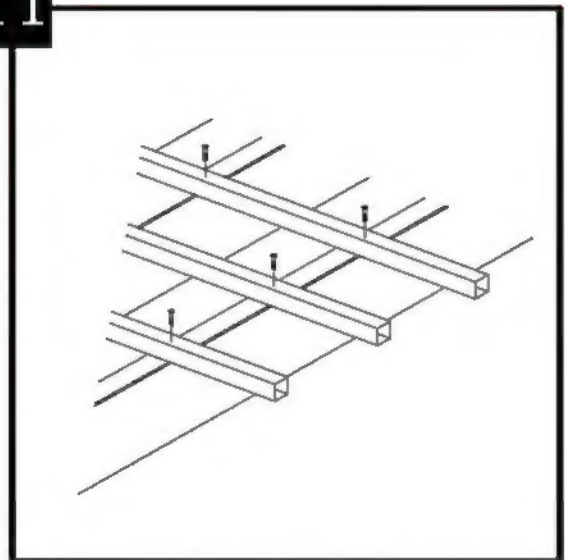
## Section 4: Purlin Installation

10

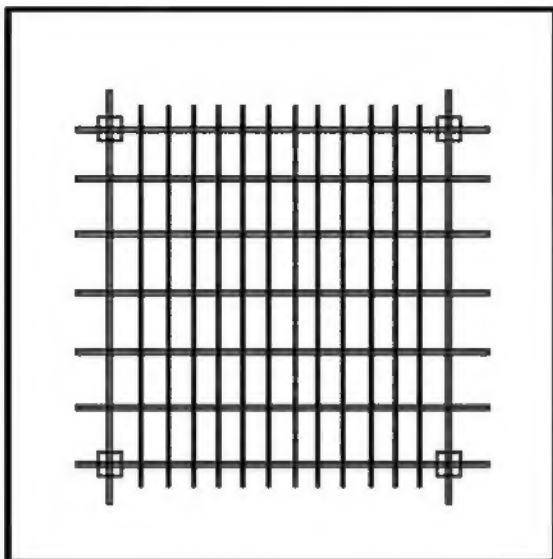


Start from the back and place the first purlin (K) 5" from the post. Space the remaining purlins evenly. The overhang should be the same on both sides.

11

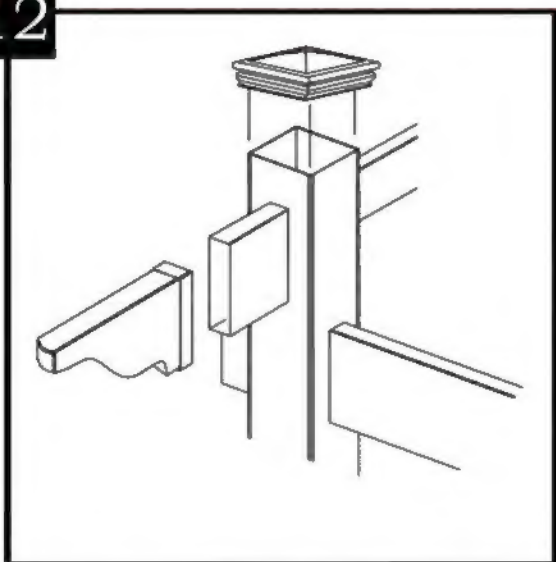


Once properly positioned, use the #10 x 2.5" self tapping screws (A) and hinged screw caps (E) to secure the purlins to the rafters. **Do not** over tighten the screws as this will cause dents in the purlin.

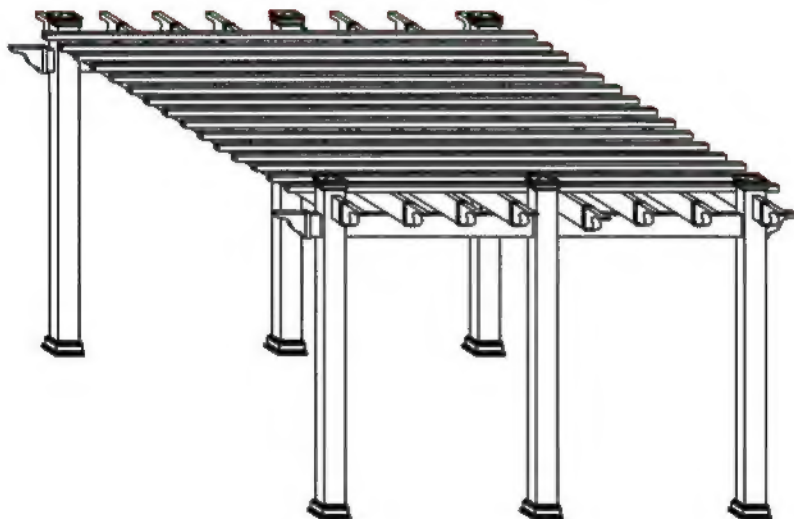


## Section 5: Finish Work

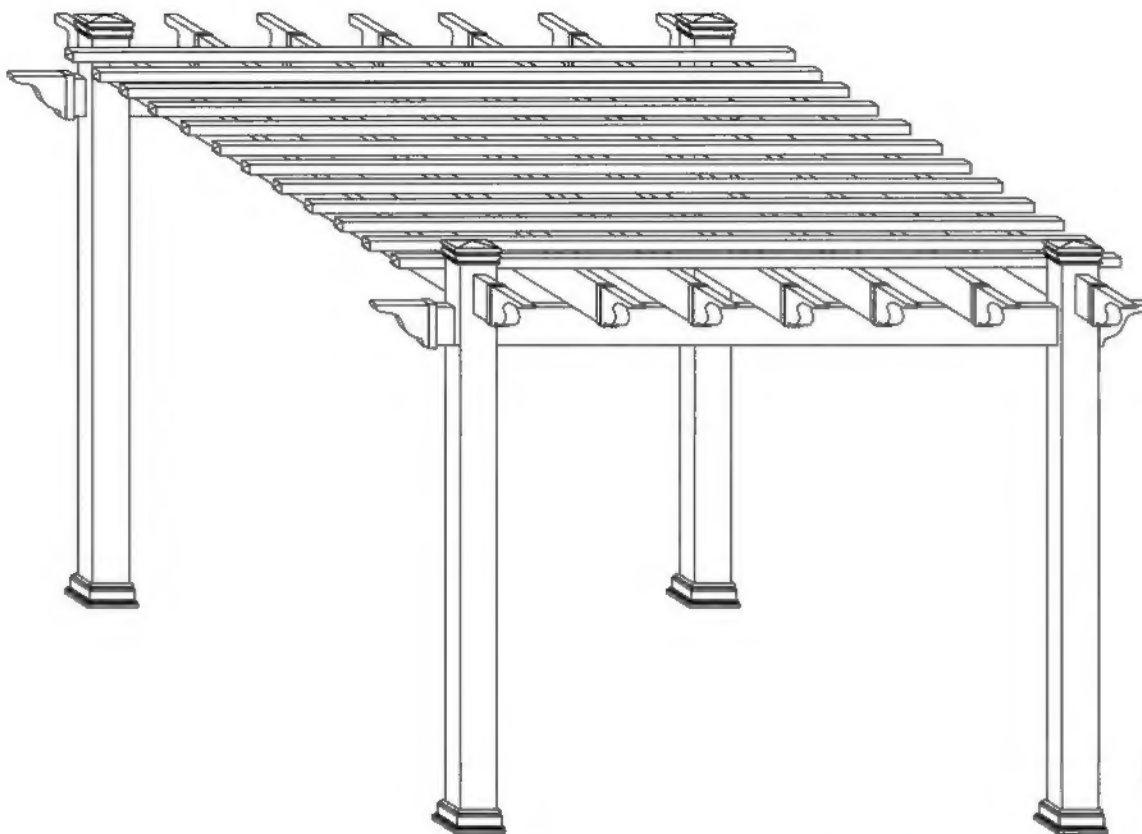
12



Place and secure the 5" post caps (F), decorative ends (M,N) and purlin caps (P) with glue.(D)



14x14



12x12